



# Standard Guide for Construction and Maintenance of Grass Tennis Courts<sup>1</sup>

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## 1. Scope

1.1 This guide covers techniques that are appropriate for the construction and maintenance of grass tennis courts. This guide provides guidance for selection of soil systems and turfgrass species in court construction and for selection of management practices that will maintain an acceptable playing surface.

1.2 Decisions in selecting construction and maintenance techniques are influenced by existing soil types, climatic factors, adaptation of grass species, level of play anticipated, intensity of use, budget, equipment, and training and ability of the turf management personnel.

1.3 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

1.4 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

## 2. Referenced Documents

2.1 *ASTM Standards:*<sup>2</sup>

C33 Specification for Concrete Aggregates

D422 Test Method for Particle-Size Analysis of Soils

D653 Terminology Relating to Soil, Rock, and Contained Fluids

D1140 Test Methods for Determining the Amount of Material Finer than 75- $\mu$ m (No. 200) Sieve in Soils by Washing

D5268 Specification for Topsoil Used for Landscaping Purposes

E11 Specification for Woven Wire Test Sieve Cloth and Test Sieves

F405 Specification for Corrugated Polyethylene (PE) Pipe and Fittings

<sup>1</sup> This guide is under the jurisdiction of ASTM Committee F08 on Sports Equipment, Playing Surfaces, and Facilities and is the direct responsibility of Subcommittee F08.52 on Miscellaneous Playing Surfaces.

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<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

## F2651 Terminology Relating to Soil and Turfgrass Characteristics of Natural Playing Surfaces

## 3. Terminology

3.1 *Definitions*—Except as noted, soil and turfgrass related definitions are in accordance with Terminology F2651.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *reel mower (also 'reel-type' mower), n*—a machine for cutting grass composed of a cylinder, formed of blades mounted on a horizontal axis. The reel consists of a number of helix-shaped blades which are attached to support spiders which are subsequently mounted on a rotating shaft. During operation the reel blades turn to contact a bedknife which executes a scissors-like cutting action. Properly performed and well-maintained, reel mowers are particularly adapted to a higher mow quality and close cutting action (often to mow heights of less than 2.5 mm ( $<1/10$  in.)) compared to other types of mowers.

3.2.2 *winter overseeding*—the practice of overseeding a cool-season turfgrass into a warm-season turfgrass stand at or near their start of winter dormancy for the purpose of providing a green, growing turf during the winter period when the warm-season species are brown and dormant.

## 4. Significance and Use

4.1 A grass tennis court should provide a relatively uniform, high quality playing surface as it relates to footing and ball bounce. Undulations, rough surface, bare spots, weeds, and wet spots detract from good play. Playing surface quality is largely affected by construction and maintenance procedures, and this guide addresses those procedures.

4.1.1 During construction, consideration should be given to factors such as soil physical and chemical properties, freedom of large stones and debris in the soil, surface and internal drainage, grass species selection, orientation of the court, and provisions for distributing wear on the playing surface.

4.1.2 Maintenance practices that influence the playability of the surface include mowing height, mowing frequency, rolling, irrigation, fertilization, weed control, disease and insect control, cultivation, thatch control, topdressing, and overseeding.

4.2 Those responsible for the design, construction, or maintenance, or a combination thereof, of tennis courts will benefit from this guide.